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An Essay on Dropsy

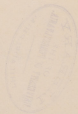
Respectfully submitted for examination

by

Buckett D. Thompson.



Thompson B.



The science of medicine has now arrived at such a state of improvement that little is left for the youthful student to engage in, but the collection of cases from those who have gone before him. I have chosen a subject which has been, until a few years past, not completely understood; the light which Dr. Keel has thrown upon it precludes the hope of any addition from me; my only object is to show, by two or three cases, the advantages resulting from his mode of treatment. After the relation of these cases I shall proceed to describe the symptoms & method of cure. It appears necessary however, in the first place to say a few words of the pathology of the disease.

The exhalant & absorbent system forms an important part of the human machine, & although the action of life is not immediately destroyed by the suspension of the functions of this system, yet it is slowly & gradually lost when it ceases to carry on its usual part. When the action of the absorbent is lost in a particular part, that part becomes distended with

serum, it forms what is called an adenaceous swelling. This
impulsion of action sometimes takes place throughout the
whole system & constitutes what is called anasarca or gene-
ral dropsy, but it is most frequently preceded by a accumu-
lation with great morbid action in the arteries induced by any
debilitating cause. Indeed it appears that congested action in
the arteries accompanied by debility in the rest of the system
will produce the disease from the serum being forced out in
the cellular membrane in greater quantity than the absorbents
take up. It is much to be lamented that physicians have
heretofore considered the disease as produced entirely by a
deficiency of the arteries & absorbents, when it has most com-
monly arisen from just an opposite cause, but it shows the value
from the blind adherence to theory, & as Dr Rush
observes, many physicians never feel the pulse of their
patients at all in this disease. That dropsy is often
by excess of action in the arterial system may be proved by
loss of pulse. We often feel a hard full & quick pulse in this
& I have seen a case where the pulse vanished but in phlegm, and

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blood drawn exhibits marks of inflammation nearly as strong
as in that disease. Dr Rush mentions a case of anasarca alter-
nating with ascitis, which is certainly, a disease arising from
excessive arterial action. Dr Sydenham relates a case of dropsy
"which he cured by means of Pouchot's" a most powerful
purgative but he failed in the next case with the same
medicines; probably from its being a disease of debility. In
his account of his practice he appears to have placed his chief
reliance on drastic purgatives, which would in some cases
more suitably the place of the lancet. He judged purga-
tives unavailing in those degrees of debility arising from
chronic diseases. That it is sometimes inflammatory appears from
"spontaneous haemorrhage from the lungs, haemorrhoids &c. &c."
taking place; from some cases of the disease being re-
solved even by stimulating medicines; & from its increasing
in violent inflammatory disease where bloodletting had not been
used to sufficient extent. In support of this I cite some of the
following arguments. They have to relate but a few cases
which have come under my notice.

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lined with allum & iron filings infused in hard
rider, & vinegar the proportions I have not been able
to ascertain. This was evidently intended for attenuating
it was of course of no service, he still however perse-
vered in the use of the medicine until the summer of
1806 when he died.

This case is not so circumstantial as I could wish
from my not having attended the patient myself, but
it is full enough to show the pernicious effects of
stimulating or tonic medicines in diseases of great mor-
bid action, for the disease was evidently increased by the
exhibition of the fer root. This alantia farinosa, or fer
root is a strong & stimulating bitter, the root is the only
part used, the other ingredients constituting the decoction
among the most powerful, bitters of the materia medica
& with these the emetics had performed a number of
cures.

The inferences to be drawn from this case are so ob-

now so rarely to call for notice, the violent but
effects of the stimulating remedy made use of, clearly
point out that a course directly opposite to the
one pursued would have been far more successful
& would probably have preserved life, but ignorance &
prejudice combined prevented other remedies being employ-
ed, & in this case as in many others, hastened the vic-
tim to an untimely grave.

The next case I shall relate is more circumstantial
having had an opportunity of noting all the symptoms
and changes myself.

In the autumn of the year 1807, Anthony a
sugar man 33 years of age, very robust & large was
attacked with a violent acute inflammation. His pulse
was full, strong, hard & frequent in 12 cases of this
was drawn the first day of his disease which was
September. The next day he took a large dose of calomel
& jalape, & on the third day he was that a second
time his blood being covered with a thick buffy coat.
The cure of his disease was now attempted by scarifica-

Sore throat was gone for several days & he swelled
 profusely on the 8th & 10th day he complained of great
 difficulty of breathing, which was relieved by a third bleed-
 ing the blood was now ~~colored~~ & covered with a coat
 nearly white. He now recovered but very slowly & com-
 plained of a pain in his side which was considera-
 bly swollen; a blister was applied to the part which
 in some measure relieved him. In about a month he
 resumed his ordinary work but still complained of his
 side which was very weak. He continued in this state
 untill the month of February when he complained of
 a difficulty of breathing particularly after any exer-
 tion; little attention was paid him, he continued at
 work as usual untill the 15th of April when he came
 in from his work & complained that he could scarcely
 breathe. On examination I discovered that he had all
 the symptoms of hydrothorax. The pulse which in a healthy
 state beat 60 strokes in a minute now beat 90, and
 was full hard & at times intermitting; he experienced

greater difficulty of breathing when lying down than when in an erect posture; he was affected with a dry cough, an inability to lie on his back, a slight pain in his back, & a sensation as if two bags were suspended from his thorax into his abdomen. Upon leaning to one side he said he could hear a rattling noise as of a fluid moving with rapidity. From these symptoms there appears to be but little doubt of his having hydrothorax. As his pulse was very full bloodletting was practiced on the 15th of April & on the 16th he took 10 grains and 15 of jalap & 4 of hyaloga which operated well. On the 17th he was bled a second time when his blood was covered with a thick buffy coat. The opinion of a very respectable physician in the neighborhood was now asked, he concurred perfectly in the opinion that it was hydrothorax, & it was judged expedient to administer digitalis & mercury combined in pills 4 grs. of the latter to 16 grs. of the former, three or four times a day, till the

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21st when they were increased to four times a day. On the
22^d complaining of a pain in his sides & sources of that
was drawn which exhibited evident marks of inflammation.
He continued taking the pills of Digitalis & mercury which
were gradually increased to six times a day without pro-
ducing any increase of the urinary discharges this is fre-
quently the case in the exhibition of the foregoing & very
much diminishes the value of that plant in medicine.
This effect however seemed to result from the use of the
medicine, that the disease was removed from his thorax.
On the abdomen forming again, his pulse beat now at about
70 in the minute, the difficulty in his breathing was con-
siderably gone & his abdomen was considerably melted. These
symptoms & his complaining of his mouth being soon reduced
me to discontinue the use of the mercury & Digitalis on the 30th.
On the 5th of May pills composed of 1 gr. calomel 2 of opiate
& 1/4 gr. of opium were exhibited 3 times a day & gradually
increased to 5 times in 24 hours, on the 12th he had a very great
discharge of urine, on the morning of the 13th when I visited

him he complained of great weakness, & a violent pain
in the lower part of the abdomen, seeming (as he expressed
it) as if the pulse had cut through the wall of his
belly. His pulse was now nearly natural, as to frequency
but very weak, a broad bandage was applied tight a-
round his abdomen, which relieved in a great measure the
pain resulting from this sudden discharge of the water
contained therein. The use of the squills was now discon-
tinued, & Peruvian Bark with lactus camphor of gentian and
columbo substituted in its place. There were continued stools
a day till the 2^d of June, he daily recovered strength but
I was very to perceive that with the return of vigour the ap-
pearance of white & anasarca also returned. On the 5th of June
his abdomen was considerably swelled and also his legs & feet
his pulse had risen as high as 88 strokes in the minute
was full. He was now directed to resume the use of the
or calomel as before. On the 11th the medicine began to show
diuretic effects, he discharged large quantities of water for se-
veral days, but the evacuation was more gradual than in
first instance; his pulse on the 12th was reduced in frequency
& power, it now beat 75 strokes in the minute. The swelling

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of the medicine was continued until the 25th when his pulse
 was at 40, the natural standard, but very intermitting. I now thou
 id it prudent to discontinue the use of the squills, & more
 more to resume the use of Peruvian bark & bitter. To the Peru
 vian bark was added an equal quantity of Bad ash bark, redu
 ced to a fine powder, & the former under an imperfect coat of
 iron, reduced likewise to a fine powder was added to the latter.
 These medicines were exhibited five times every day & the patient
 was ordered to ride out on horseback every morning. He continu
 ed to improve very fast without any bad symptom appearing till
 the 21st of July when from independently exposing himself to the
 drench night air he contracted a cold which soon brought on a re
 turn of all the disagreeable symptoms so lately removed. The swelling
 of the abdomen & legs & feet subsided & his face rose was also
 considerably cleared. On the 24 he once more had recourse to the
 calomel, squills, & opium, but the medicine now seemed more than
 in its operation than heretofore, mercurial treatment was ordered
 to be used in water his arms, & on the first of August his mouth
 became sore, on the 5th the diuretic effects of the squills became
 evident, & on the 12th the water was completely discharged, but the
 patient was left in a state of extreme debility. On the 15th

he was able to walk out & appeared to be in the recovery, but just at this time his mind suffered a severe shock from the death of a friend & he fell into a state of extreme dependency from that event. The pulse at this time beat 45 strokes in the minute & was remarkable for its intermissions. On the 17th following unusually well he determined to walk out alone at which P.M. &c. at 1 was found lying dead in a pit near his home.

I thus terminated this case which is often platted me with the hope of a happy result - only to make the disappointment the greater. I suppose his death was occasioned by an effusion of serum into the brain, as he had no symptoms of hydrothorax at the time he died, & no appearances of suffocation were observed. I could not procure leave to open his body after death which is a subject of great regret to me. This case was evidently of an inflammatory nature & I am inclined to believe that if bloodletting had been used to a sufficient extent in the commencement

of the disease the unfortunate patient would have recovered; but this is an instance among many others where a third adherence to theory has proved fatal the the an-
sally action.

I have but one more case to relate & that will prove the justice of the preceding remark.

Philip a negro man applied to me the 11th of August for relief in a wound. He informed me he had been attacked with a violent inflammatory Rheuma-
tism for which he was bled but once. He in a measure recovered but on July observed his legs to swell considerably; the swelling gradually advanced upwards till it reached his abdomen which was considerably transpired at the time I saw him. His pulse was full frequent & bounding his urinary discharges were smaller & his thirst considerable. I immediately took the pulse of blood & gave him a drastic purgative composed of calomel, jalap & gamboge. This drastic will on the 28th be circulated two
bits of potash was given in small doses so as to pro-
duce diuretic effects. The bloodletting was continued every

other day for some time bled at a bleeding. The
 issues of tartar emetic produced the effect intend-
 ed, & his pulse on the 1st of September was con-
 siderably reduced in force & frequency. The blood
 sitting was now broiled once or twice a week as
 his pulse seemed to indicate its necessity. At the
 first bleeding the blood exhibited no marks of in-
 flammation, but at the second & third it was cov-
 ered with an inflammatory buff, which gradually
 disappeared at the subsequent bleedings. This plan
 of treatment was pursued in in till the 23rd of
 September when every symptom of dyspepsia had left
 him, but he was in a state of great debility, his
 pulse which had been full & strong was now weak
 & frequent. On this situation I ordered him to
 take an infusion of dog wood bark & bitter of
 red cedar & columbo. He was likewise directed to
 ride out on his horse every day. He was rapidly re-
 covered; on the 1st of November his health was complete

re-established & he has had no return of his disease since.

This is a case where the common mode of treatment produced a complete cure in a short time of a case of anasarca, accompanied with symptoms very similar to those described in the preceding cases in both the pulse was full strong & frequent & in both the blood drawn showed evident marks of inflammation. The constitution of the patient in the case immediately preceding the last was certainly much the strongest & I ascribe the different termination of the disease in the two, entirely to the difference in the treatment.

I shall now go on & describe the most remarkable symptoms attending dropsy. I have however anticipated in some measure this part of the subject in the description of the case above, & in every practical writer will find this subject well described.

The first symptom usually observed in ascites (as to that species of dropsy I confine myself) is a swelling of the lower extremities greater in the evening than morning; upon making pressure with the finger upon the part a depression remains for some time but gradually rises & disappears. This swelling usually appears first in the feet, but gradually runs up into the legs & thighs and becomes much enlarged. With this there generally occurs great thirst, with a diminished secretion of the urine which discharges into a copious sediment. When the disease is farther advanced & water has collected in the abdomen a fluctuation may be perceived by the practitioner applying his hands on opposite sides of the abdomen & gently striking the sense of weight is perceptible to the patient which varies situation with his position. The abdomen is sometimes so much enlarged, & in the female sex pregnancy has been mistaken for it, but the difference may be perceived, for the fluctuation before mentioned, & from the tumour in pregnancy gradually rising from the birth of the fetus

while in drooping it is most frequently uniform over
the whole surface. There is often attending this stage of
dyspnoea a difficulty of breathing arising to the water
preventing the action of the diaphragm downwards.
When the disease has progressed so far that an effu-
sion has taken place into the thorax, it is charac-
terised by a difficulty of breathing, preceded by a rising
anxiety about the stomach. This difficulty of breathing oc-
curs at first when any unusual exertion is made, but
gradually becomes constant attended with a cough at first
dry, but afterward accompanied with a some expectoration
of a thin watery mucus. The patient, & sometimes the phy-
sician, can hear a rattling noise, upon turning the patient
from one side to the other, as of water making with rapidity
through a narrow passage. The patient can frequently lie flat
on one side than on the other, sometimes only on his
back, & sometimes is obliged to keep in an erect posture.
Altogether, he experiences a sensation as if his lungs were
suspended from his thorax, owing to the water pressing
the diaphragm down into the abdomen. The disease now =

times runs on till an effluvia takes place in the brain & produces sudden death. The pulse in anasarca is in some cases is full hard & quick, in others, is weak as hardly to be perceived and very frequent. This depends on the species of dropsy, whether of the tonic or atonic kind. The symptoms do not always occur as I have here mentioned; sometimes the disease commences with the swelling of the abdomen, at others with effluvia into the lungs &c. I know the symptoms here enumerated the disease may easily be distinguished from all others & the mode of treatment I shall proceed to describe, seems to be the one in which most reliance is at present placed, & which appears to me to be the one best adapted to the cure of dropsy depending on general arterial action.

The first remedy I shall mention is bloodletting. This should always be practised where the pulse is full & strong, & to be used to advantage must be often repeated till the inflammatory action of the arteries is subdued. "But, should quinine cause effluvia in which case it succeeds but not till after it has been used two

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kind.* The efficacy of accidental or spontaneous hemorrhages confirms the advantage of this remedy. A case is mentioned by Cunkersbach in his history on the dysphasia, of a man who had had for two years disjunct swellings of his lower extremities with a hæmorrhage both of which were relieved by the accidental bursting of a blood-vessel in his lungs from which he lost a quart of blood. Doct. Rush says he has known "one case in which spontaneous hæmorrhage from the hæmorrhoidal vessels & from the nose instantly succeeded numerous disjunct swellings. In this patient there had been an uncommon tension & fullness of the jugulars."

Purgings. On this remedy Doct. Sydenham places his greatest dependence, & to effect a cure he says cathartics should be exhibited every day if the strength of the patient will permit, & they are not officious unless they operate well, & there seem to differ with respect to the most proper purgative. Some prefer cream of tartar, & others appear to have preferred the most drastic purgatives. It is probable the drastic purgatives are most proper in these dropsy & the most

* Doct's medical Enquiries Vol. 2^d pag 109 from several London & Turkey.

purgatives are best adapted to dropsies of debility.

Vomits. These have been highly spoken of by some authors, in the cure of dropsy. But these supposes that was far more beneficial when it produced vomiting than when administered without producing that effect. If ten patients be cured, seven, in whom vomiting was excited & three do in whom vomiting did not take place. The words are the contrast here between the emetic & other evacuations. *Species of this medicine is very apparent & derived from the three who were not cured the other evacuations were increased but no vomiting was produced. All the ten patients had apoplexy four of the men cured had anasarca three of them, hydrothorax, & two of them, both anasarca & hydrothorax; in all the three not cured, there was pure apoplexy one of which was of men again standing after incessant vomiting, but says that strong anastomosis are best adapted to the purpose. Dr Sydenham speaks highly of a confusion of the cerebri instillation which appears to have produced its good effect, rather by its inducing vomiting than purging.*

Certain medicines which promote the discharge by the kidneys known by the name of diuretics have been long exhibited & employed in the cure of dropsy. I shall only mention the most powerful of these medicines. Digitalis has long been used as a diuretic, but it appears to me to produce its beneficial effects rather by lessening great arterial action, than procuring an urinary discharge, hence this medicine is best adapted to dropsies of the inflammatory type. In the second case mentioned above the medicine always lessens the fullness & frequency of the pulse but never produces any diuretic effects. It is much to be lamented that so powerful a medicine as this should so often fail in its effects from exhaustion in gathering or procuring it.

Iguilla has likewise been highly recommended as a diuretic & in my opinion possesses this property in a much higher degree than the medicine last spoken of, & its effect on the pulse is little inferior. Where its diuretic properties are required, it should be given in small doses at a time often repeated so as to excite a slight nausea without producing vomiting. Its action by vomiting has been mentioned under the

the kind of vomits.

Vomits has been highly spoken of by Dr Rush in his Enquiries to which work I refer you. Sacram of tartar has been recommended likewise as a diuretic. I have found it to answer the purpose very well when given in small doses. Saccharum of tartar is the best suited with so highly spoken of by Dr Sydenham.

The star root (*alanthis farinosa*) has been used as a diuretic in Virginia but I can say nothing in its favor from my own experience. It appears to be best adapted to the stonic species of aching.

Doct Rush supposes that diuretics act "not by changing the stagnating water but by creating such a powerful secretion in the kidneys from the action of the ascending blood, as to make room for the absorption & conveyance of the stagnating water into the blood-vessels."

The star remedy used in aching such as excessive heat, fasting &c are often of the greatest advantage particularly when combined with the remedy already mentioned.

The last remedy for stone aching I shall mention is of helping. When there is a great collection of water in the

derives & all the above-mentioned remedies fail in discharging it, recourse is usually had to the operation called tapping. For directions for performing this operation I must refer to surgical writers to whom it properly belongs. I would only observe that the water should not be evacuated too suddenly, as it would produce a great degree of debility from the want of a relaxation of so powerful a stimulus as the water, & a bandage should be immediately applied very tight around the abdomen. Punctures in the legs & feet are often of service & sometimes will discharge the whole of the water in the body in two days. They are greatly preferable to blisters which in some instances will for the same purpose.

The remedies which have been mentioned are chiefly intended for that state of dropsy depending on the mind action, & which I have called tonic dropsy. I shall now say a few words of the remedies proper in dropsy of debility or atonic dropsy. As in the species already mentioned the first indication was to excite Natural action, so in this it should be to strengthen the action, & the first medicine I shall mention for answering this effect is Peruvian bark. This invaluable medicine must

be of great service in dropsy by increasing the strength of both the arterial & venous systems. It is of advantage in any state of this disease should be given in pretty large doses. Opium is likewise valuable mainly in this species of dropsy; some authors have recommended it but the powdered form being exhibiting it without having paid any attention to the pulser.

Cholagogue medicines & evacuating tonics of all kinds are of great service in atonic dropsy. Mercury has been known to cure several cases where a plentiful salivation has been excited by it. Blisters are very useful & should be given in combination with the tonics above mentioned. Diuretics may be used in this species as well as the other & often with great advantage; the same diuretics mentioned before may be used here. Friction Dr. Cullen recommends is very often serviceable & hands applied togeth round the extremities are very often of utmost advantage. Exercise is also serviceable in this kind of dropsy, it should always be used.

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I have now enumerated the remedies which by the
best practical writers are supposed to be of most ad-
vantage in dyspepsia in the exhibition of these I would re-
commend the most careful attention to the state of the pulse
for as this will depend their success. Dyspepsia was for a
long time considered as a monster with which the art of
medicine might contend in vain, now it then a remedy
was supposed to be discovered which would slay his rage
but what has since his experience prove that this remedy
the more or supposition in those which had good effects.
The great mercury & opium were in their turn considered as
as the conquerors of this formidable enemy to the human
race, but their triumphs & reputation were of short du-
ration, for the monster from some appeared to gain additional
at present while these produced no beneficial effects. In
vain did physicians search the vegetable & mineral kingdoms
for an antidote at one time flattered with the hope of success
the next moment left the objects of despair. In this long
struggle no one thought of consulting the Rules, which
has very properly been called the centinel of the system.

to this no attention was paid till the publication of
Doct. Rush's Medical Regimen. A new light seemed now
to burst forth, these medicines which had been thrown
aside as useless, were now viewed with the greatest con-
fidence, the dark appears now to be cleared in a great measure
of one of his most useful medicines.

It now remains for me to express my obligations to
Doct. Rush for a great many of the ideas contained in
this dissertation. as if I should have added one fact to
the stock of information already possessed I shall feel
amply rewarded.

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